

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
15 April 2004 (15.04.2004)

PCT

(10) International Publication Number  
WO 2004/032180 A3

(51) International Patent Classification<sup>7</sup>: H01J 61/20, 61/72, 61/35, C03C 3/076, 4/20, H01J 61/42

(21) International Application Number:  
PCT/IB2003/004233

(22) International Filing Date:  
17 September 2003 (17.09.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
02079124.0 4 October 2002 (04.10.2002) EP

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(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

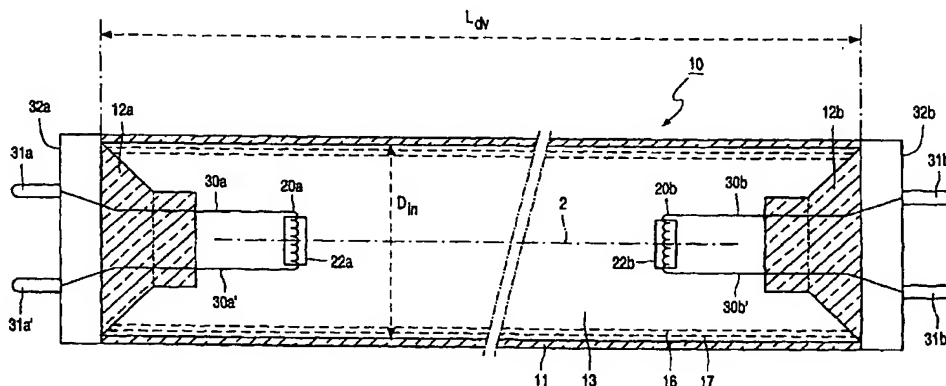
(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

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[Continued on next page]

(54) Title: LOW-PRESSURE MERCURY VAPOUR DISCHARGE LAMP



(57) Abstract: Low-pressure mercury vapor discharge lamp has an at least partly substantially cylindrical discharge vessel (10) with a length  $L_{dv}$  and with an internal diameter  $D_{in}$ . The discharge vessel (10) encloses, in a gastight manner, a discharge space (13) provided with an inert gas mixture and with mercury. The discharge vessel (10) comprises discharge means (electrodes 20a; 20b) for maintaining a discharge in the discharge space (13). According to the invention, the ratio of the weight of mercury  $m_{Hg}$  in the discharge vessel (10) to the product of the internal diameter  $D_{in}$  and the length of the discharge vessel  $L_{dv}$  is given by the relation: Formula (I), wherein  $C \leq m(F) \leq 0.01 \text{ g (m) g/mm}^2$ . Preferably,  $0.0005 \leq m(F) \leq 0.005 \text{ g (m) g/mm}^2$ . Preferably, the discharge vessel (10) contains less than 0.1 mg mercury. The discharge lamp according to the invention operates under unsaturated mercury conditions.



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**Published:**

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

**(88) Date of publication of the international search report:**

25 August 2005

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
15 April 2004 (15.04.2004)

PCT

(10) International Publication Number  
**WO 2004/032180 A2**

(51) International Patent Classification?: **H01J 61/00**  
(21) International Application Number:  
PCT/IB2003/004233

(22) International Filing Date:  
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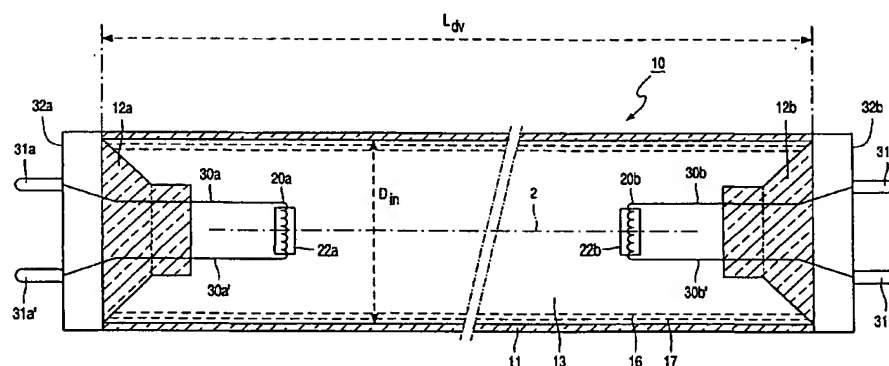
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(54) Title: **LOW-PRESSURE MERCURY VAPOR DISCHARGE LAMP**



$$\frac{m_{\text{Hg}}}{D_{\text{in}} \times L_{\text{dv}}} = C \quad (I)$$

(57) Abstract: Low-pressure mercury vapor discharge lamp has an at least partly substantially cylindrical discharge vessel (10) with a length  $L_{\text{dv}}$  and with an internal diameter  $D_{\text{in}}$ . The discharge vessel (10) encloses, in a gastight manner, a discharge space (13) provided with an inert gas mixture and with mercury. The discharge vessel (10) comprises discharge means (electrodes 20a; 20b) for maintaining a discharge in the discharge space (13). According to the invention, the ratio of the weight of mercury  $m_{\text{Hg}}$  in the discharge vessel (10) to the product of the internal diameter  $D_{\text{in}}$  and the length of the discharge vessel  $L_{\text{dv}}$  is given by the relation: Formula (I), wherein  $C \leq 0.01 \mu\text{g}/\text{mm}^2$ . Preferably,  $0.0005 \leq C \leq 0.005 \mu\text{g}/\text{mm}^2$ . Preferably, the discharge vessel (10) contains less than 0.1 mg mercury. The discharge lamp according to the invention operates under unsaturated mercury conditions.



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**Published:**

— without international search report and to be republished upon receipt of that report

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